

Name: _____

at1110paper_practice_test (v8)

1. Factor the expression.

$$64x^2 - 25$$

$$(8x - 5)(8x + 5)$$

2. Solve the equation.

$$12x^2 - 9x + 7 = 5x^2 + 2x + 3$$

$$7x^2 - 11x + 4 = 0$$

$$(7x - 4)(x - 1) = 0$$

$$x = \frac{4}{7} \quad x = 1$$

3. Expand the following expression into standard form.

$$(3x + 8)^2$$

$$9x^2 + 24x + 24x + 64$$

$$9x^2 + 48x + 64$$

4. Factor the expression.

$$x^2 - 12x + 35$$

$$(x - 7)(x - 5)$$

5. Expand the following expression into standard form.

$$(9x + 4)(9x - 4)$$

$$\begin{aligned}81x^2 - 36x + 36x - 16 \\81x^2 - 16\end{aligned}$$

6. Expand the following expression into standard form.

$$(9x + 5)(3x + 8)$$

$$\begin{aligned}27x^2 + 72x + 15x + 40 \\27x^2 + 87x + 40\end{aligned}$$

7. Solve the equation.

$$(4x + 5)(7x - 2) = 0$$

$$x = \frac{-5}{4} \quad x = \frac{2}{7}$$

8. Solve the equation with factoring by grouping.

$$12x^2 + 18x - 10x - 15 = 0$$

$$\begin{aligned}(6x - 5)(2x + 3) = 0 \\x = \frac{5}{6} \quad x = \frac{-3}{2}\end{aligned}$$